

Appl. No. 09/681,524
Amdt. dated 09/14/2003
Reply to Office action of 03/14/2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A multi-tube fluorescent discharge lamp, comprising:

~~A first tube which is an inner most tube;~~

~~A second tube, which is slightly larger than the first tube; and~~

~~plural cathode, which are fixed on the two pair of electrodes and connected to the both sides of the first tube respectively; wherein the tubes are constructed of different caliber in coaxial, coating phosphor on the outer layer surface of the first tube and inner layer surface of the second tube, by isolating, perforating and blocking the discharge path, forming a successive discharge path, in the discharge chamber is in a state of vacuum and with little Hg; multiple number glass tubes of total tubes is N, which construct multiple glass tubes of different caliber in coaxial structure;~~

~~an isolator is near the middle of the inner most first tube extends to the (N-1)th tube;~~

~~plural-numbered through-holes are near both sides of the isolator on the odd-numbered tubes from the inner most first tube to the (N-1)th tube, and around the ends of the even-numbered tubes from the inner second tube to the (N-2)th tube;~~

~~a pair of cathodes are placed in both ends of the inner most first tube;~~

~~phosphor layer is on the inner and outer surfaces of the tubes from the inner second tube to the (N-1)th tube, on the outer surface of the inner most first tube, and on the inner surface of the Nth tube; and~~

~~both ends of all tubes are sealed, to form a succession of interconnected discharge chambers, in the discharge chambers are in a state of vacuum and with Hg.~~

Claim 2-3 (canceled)

Claim 4 (currently amended): A multi-tube fluorescent discharge lamp, comprising:

~~A first tube which is an inner most tube;~~

~~A second tube, which is slightly larger than the first tube;~~

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~~A third tube, which is slightly larger than the second tube; and
plural cathode which are fixed on the two pair of electrodes and connected to the both sides
of the first tube respectively; wherein the tubes are constructed of different caliber in coaxial,
coating phosphor on the outer and inner layer surface of the first tube, the second tube and the
inner layer surface of the third tube, by isolating, perforating and blocking the discharge path,
forming a successive discharge path, in the discharge chamber is in a state of vacuum and
with little Hg. multiple number glass tubes of total tubes is N, which construct multiple glass
tubes of different caliber in coaxial structure;~~

an isolator is near the middle of the inner most first tube extends to the (N-1)th tube;

plural-numbered through-holes are near both sides of the isolator on the odd-numbered tubes
from the inner most first tube to the (N-2)th tube, and around the ends of the even-numbered
tubes from the inner second tube to the (N-1)th tube;

a pair of cathodes are placed in both ends of the inner most first tube;

phosphor layer is on the inner and outer surfaces of the tubes from the inner most first tube to
the (N-1)th tube, and on the inner surface of the Nth tube; and

both ends of all tubes are sealed, to form a succession of interconnected discharge chambers,
in the discharge chambers are in a state of vacuum and with Hg.

Claim 5-8 (canceled)

Claim 9 (currently amended): A multi-tube fluorescent discharge lamp, comprising:

~~two first tubes are the inner most tube;~~

~~A second tube, which is slightly larger than the first tube;~~

~~A third tube, which is slightly larger than the second tube; and~~

~~plural cathode which are fixed on the two pair of electrodes and connected to the one sides of
the two first tube and installed oppositely in the second tuber; wherein the tubes are
constructed of different caliber in coaxial, coating phosphor on the outer layer surface of the
first tube, the inner and outer layer surface of the second tube and the outer layer surface of
the third tube, by isolating, perforating and blocking the discharge path, forming a successive
discharge path, in the discharge chamber is in a state of vacuum and with little Hg. multiple
number glass tubes of total tubes is N, which construct multiple glass tubes of different
caliber in coaxial structure;~~

an isolator is near the middle of the inner second tube extends to the (N-1)th tube;

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plural-numbered through-holes are near both sides of the isolator on the odd-numbered tubes from the inner third tube to the (N-2)th tube, and around the ends of the even-numbered tubes from the inner second tube to the (N-1)th tube;
a pair of cathodes are connected to the both ends of the inner most first tubes, placed in both of the inner second tube, near the two sides of the isolator;
phosphor layer is on the inner and outer surfaces of the tubes from the second tube to the (N-1)th tube, on the outer surface of the inner most first tube, and on the inner surface of the Nth tube; and
both ends of all tubes are sealed, to form a succession of interconnected discharge chambers, in the discharge chambers are in a state of vacuum and with Hg.

Claim 10-13 (canceled)

Claim 14 (currently amended): The fluorescent lamp of claim 1,4 or 9 wherein said ~~the discharge-tube tubes~~ are transparent glass tube.

Claim 15 (currently amended): The fluorescent lamp of claim 1,4 or 9 wherein said ~~the discharge-tube tubes~~ are transparent glass tube of different colors.

Claim 16 (currently amended): The fluorescent lamp of claim 1,4 or 9 wherein said [[the]] cathode is fixed on the electrode pair of a stem which includes a pipe and a hole that communicated with the pipe.

Claim 17 (currently amended): The fluorescent lamp of claim 1,4 or 9 wherein said [[the]] ~~Phosphor layer surface is coated with various fluoreseent material of~~ has different color ~~temperature temperatures~~ on the different layer surface.

Claim 18 (currently amended): The fluorescent lamp of claim 1,4 or 9 wherein said [[the]] cathode which is straight cathode or ring cathode.

Claim 19 (currently amended): The fluorescent lamp of claim 1,4 or 9 wherein said [[the]] cathode is cold cathode or hot cathode.

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Claim 20 (currently amended): The fluorescent lamp of claim 1,4 or 9 wherein the discharge [[tube]] chambers filled in ~~little~~ Ar.

Claim 21 (currently amended): The fluorescent lamp of claim 1,4 or 9 wherein also comprise ~~plural base~~ two bases of lamp with ~~plural terminal~~ a pair of terminals on both end of the lamp.

Claim 22 (currently amended): The fluorescent lamp of claim 21 wherein [[said]] the ~~plural terminal of the base~~ terminals are connected to the electrodes of the cathode respectively.